BIBLIOGRAPHY

[RICHMOND T. ZOCH, *in Charge of Library*]

By AMY D. PUTNAM

RECENT ADDITIONS

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies:

Azeredo Penna, Lenoam de.
A meteorologia, o solo e a planta. Rio de Janeiro. 1934. 81 p. ill., pl., etc. 27½ cm. (Instituto de meteorologia, hidrometria e ecologia agricola.)

Bernheimer, W[alter] E.
Apparate und Methoden zur Messung der Gesamtstrahlung der Himmelskörper. Berlin. 1936. 16 p. tables. 25 cm. (Sonderabdruck aus dem Handbuch der Astrophysik, von G. Eberhard u. a. Band VII.)

Bjerknes, J., & Godske, C. L.
On the theory of cyclone formation at extra-tropical fronts. Oslo. 1936. p. 199–235. figs. 24 cm. (Astrophysica norvegica. v. 1, no. 6. Februar 1936.)

Cline, Isaac Monroe.
A century of progress in the study of cyclones; aids in forecasting movements and destructive agencies in tropical cyclones. New Orleans. 1935. 29 p. diagrs. 23 cm. Bibliography: p. 24–29.

Goddard, Robert Hutchings.
Liquid-propellant rocket development. Smithsonian institution. Washington. 1936. 10 p. 11 pl., diagr. 24½ cm. (Smithsonian miscellaneous collections. v. 95, no. 3.) Publication 3381.

Hoffstedt, Hans.
Korrelationen zwischen Luftdruck, Temperatur und Tropopausenhöhe. Helsingfors. 1935. 14 p. tabs. 24½ cm. (Mittellungen des Meteorologischen Instituts der Universität Helsingfors. n:o 27.)

Lemon, Harvey Brace.
Cosmic rays thus far, with a foreword by Arthur Holley Compton, drawings by Chichi Lasley. New York. [c1936.] 128 p. incl. front., illus., plates, diagrs. 22 cm. "First edition."

Lindsay, Martin.
Sledge; the British trans-Greenland expedition, 1934, with 5 maps, 48 half-tone plates, and numerous line illustrations. Lond. [etc.] [1935.] 342 p. front., illus., etc. 24 cm.

Namekawa, Tadao, & Aoki, Shiichi.
A view of the structure of the "Muroto typhoon." Kyoto. 1936. p. 79–91. illus., diagr. 25½ cm. (Reprint: Memoirs of the College of science, Kyoto imperial univ. Ser. A. v. XIX, no. 2, 1936.)

Sanford, Fernando.
Influence of planetary configurations upon the frequency of visible sun spots. Wash. 1936. 5 p. 24½ cm. (Smithsonian miscellaneous collections. v. 95, no. 11.) Publication 3391. At head of title: Arthur fund.

U. S. National resources board.
A report on national planning and public works in relation to natural resources and including land use and water resources with findings and recommendations. Dec. 1, 1934. Submitted to the President in accordance with Executive order no. 6777, June 30, 1934. Wash. 1934. vii, 455 p. incl. illus., tables. maps, charts, & diagrs. (all part. fold.). 29½ cm.

Weightman, Richard Hanson.
Forecasting from synoptic weather charts. Wash. 1936. 47 p. maps, charts, diagrs. 23 cm. (U. S. Dept. of agric. Miscellaneous publication no. 236.) Contribution from Weather bureau. "Literature cited": p. 44–46.

SOLAR OBSERVATIONS

SOLAR RADIATION OBSERVATIONS DURING JULY 1936

By IRVING F. HAND, *Assistant in Solar Radiation Investigations*

For a description of instruments employed and their exposures, the reader is referred to the January 1935, REVIEW, page 24.

Table 1 shows that solar radiation intensities averaged above normal for July at both Washington and Lincoln, and below normal at Madison. A great deal of haze was noted during most of the observational periods at Madison.

Table 2 shows an excess in the total solar and sky radiation received on a horizontal surface at all stations except Miami, Blue Hill, Riverside, and Friday Harbor—all coastal stations. The excess at some stations was greater than for any previous month.

Table 3 shows high turbidity values at both Washington and Blue Hill, with moderate water-vapor content of the atmosphere considering the season of the year.

Polarization observations taken at Washington on 5 days give a mean of 56 percent with a maximum of 58 percent on the 7th. At Madison, observations made on 12 days give a mean of 50 percent with a maximum of 59 percent on the 7th. The values for Washington are slightly below the July normals, while those for Madison are considerably below the normals for the month.

TABLE 1.—*Solar radiation intensities during July 1936*

[Gram-calories per minute per square centimeter of normal surface]

WASHINGTON, D. C.

Date	Sun's zenith distance									
	8 a. m.	78.7°	75.7°	70.7°	60.0°	0.0°	60.0°	70.7°	75.7°	78.7°	Noon
	75th mer. time	Air mass									Local mean solar time
		A. M.					P. M.				
	e	5.0	4.0	3.0	2.0	[1] 1.0	2.0	3.0	4.0	5.0	e
	mm	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*cal.*	*mm*
July 7	14.60	------	------	------	1.16	1.46	------	------	------	------	10.21
July 8	14.10	------	------	------	1.10	1.35	------	------	------	------	16.20
July 9	17.37	------	------	------	1.04	1.27	------	------	------	------	17.37
July 10	17.96	------	------	------	.84	1.24	------	------	------	------	16.79
July 15	16.79	------	------	0.71	.89	1.18	------	------	------	------	16.79
July 17	15.11	------	------	.72	.81	1.14	------	------	------	------	13.13
July 23	17.37	------	------	.84	.99	1.23	------	------	------	------	14.10
July 25	10.97	------	------	.55	.81	1.23	------	------	------	------	9.14
Means	------	------	------	.70	.96	1.26	------	------	------	------	------
Departures	------	------	------	−.08	+.04	+.05	------	------	------	------	------

[1] Extrapolated.